

APPENDIX - AMENDED CLAIMS

Version of amended claims 1, 30, 33, 55, and 56 with markings to show changes made, pursuant to 37 C.F.R. 1.121(c)(1)(ii):

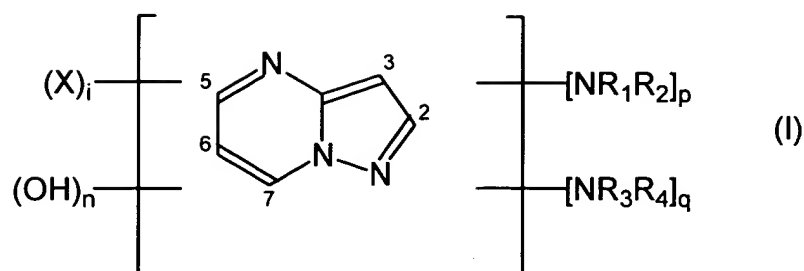
1. (Twice Amended) A composition for oxidation dyeing of keratin fibers, comprising:

- at least one first oxidation base chosen from 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane and acid-addition salts thereof;
- at least one second oxidation base chosen from para-phenylenediamine, para-toluenediamine, N,N-bis-(β -hydroxyethyl)-para-phenylenediamine, 2-(β -hydroxyethyl)-para-phenylenediamine, 2,6-dimethyl-para-phenylenediamine, 2-isopropyl-para-phenylenediamine, 2-chloro-para-phenylenediamine, N-phenyl-para-phenylenediamine, 4,4'-diaminodiphenylamine, N-methoxyethyl-para-phenylenediamine, 2-n-propyl-para-phenylenediamine, 4-aminophenol, N-methyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 3-methyl-4-aminophenol, 2-aminomethyl-4-aminophenol, 2-(β -hydroxyethylaminomethyl)-4-aminophenol, 2-methoxy-4-aminophenol, 2-methoxymethyl-4-aminophenol, [tetraaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-N-methylpyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, N,N'-bis(β -hydroxyethyl)-N,N'-bis(4'-aminophenyl)-1,3-diaminopropanol, 3-amino-6-dimethylaminopyridine and pyrazolo[1,5-a]pyrimidines of formula (I):

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C



in which:

- R_1 , R_2 , R_3 and R_4 , which are identical or different, are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, $(C_1$ - C_4)alkoxy(C_1 - C_4)alkyl radicals, C_1 - C_4 aminoalkyl radicals wherein said amino can be protected with a protective group chosen from acetyl, ureido and sulphonyl groups, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C_1 - C_4)alkylamino(C_1 - C_4)alkyl radicals, and di[hydroxy(C_1 - C_4)alkyl]amino-(C_1 - C_4)alkyl radicals;
- radicals X are identical or different, and are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, C_1 - C_4 aminoalkyl radicals, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C_1 - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[hydroxy(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, amino radicals, (C_1 - C_4)alkyl-amino radicals, di[(C_1 - C_4)alkyl]amino radicals, halogen atoms, carboxylic acid groups and sulphonic acid groups;

- i is chosen from 0, 1, 2 and 3;

- p is chosen from 0 and 1;

- q is chosen from 0 and 1;

- n is chosen from 0 and 1;

with the proviso that:

- (i) the sum $p + q$ is other than 0;

- (ii) when $p + q$ is equal to 2, then n is 0 and the groups NR_1R_2 and NR_3R_4 occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iii) when p is equal to 1 and q is equal to 0, then n is 1 and the group NR_1R_2 and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iv) when p is equal to 0 and q is equal to 1, then n is 1 and the group NR_3R_4 and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);]

and acid-addition salts thereof;

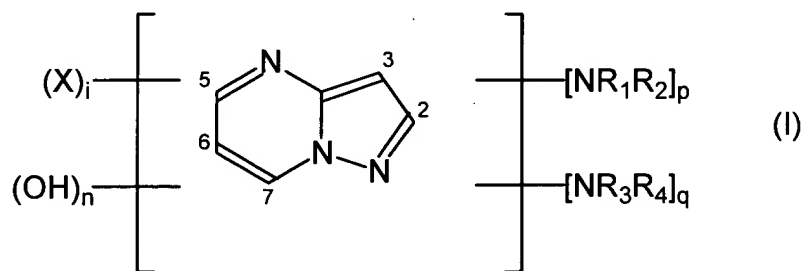
- and at least one coupler.

30. (Twice Amended) A composition for oxidation dyeing of keratin fibers comprising

- at least one oxidation base chosen from acid-addition salts of 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane, wherein said salts are chosen from hydrochlorides, hydrobromides, sulphates, citrates, succinates, tartrates, lactates and acetates;

- at least one second oxidation base chosen from para-phenylenediamine, para-toluenediamine, N,N-bis-(β -hydroxyethyl)-para-phenylenediamine, 2-(β -hydroxyethyl)-para-phenylenediamine, 2,6-dimethyl-para-phenylenediamine, 2-isopropyl-para-phenylenediamine, 2-chloro-para-phenylenediamine, N-phenyl-para-phenylenediamine,

4,4'-diaminodiphenylamine, N-methoxyethyl-para-phenylenediamine, 2-n-propyl-para-phenylenediamine, 4-aminophenol, N-methyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 3-methyl-4-aminophenol, 2-aminomethyl-4-aminophenol, 2-(β -hydroxyethylaminomethyl)-4-aminophenol, 2-methoxy-4-aminophenol, 2-methoxymethyl-4-aminophenol, [tetraaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-N-methylpyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, N,N'-bis(β -hydroxyethyl)-N,N'-bis(4'-aminophenyl)-1,3-diaminopropanol, 3-amino-6-dimethylaminopyridine and pyrazolo[1,5-a]pyrimidines of formula (I):



in which:

- R_1 , R_2 , R_3 and R_4 , which are identical or different, are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, $(C_1$ - C_4)alkoxy(C_1 - C_4)alkyl radicals, C_1 - C_4 aminoalkyl radicals wherein said amino can be protected with a protective group chosen from acetyl, ureido and sulphonyl groups, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings,

hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, and di[hydroxy(C₁-C₄)alkyl]amino-(C₁-C₄)alkyl radicals;

- radicals X are identical or different, and are chosen from a hydrogen atom, C₁-C₄ alkyl radicals, aryl radicals, C₁-C₄ hydroxyalkyl radicals, C₂-C₄ polyhydroxyalkyl radicals, C₁-C₄ aminoalkyl radicals, (C₁-C₄)alkylamino(C₁-C₄)alkyl radicals,

di[(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings,

hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[hydroxy(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, amino radicals, (C₁-C₄)alkyl-amino radicals, di[(C₁-C₄)alkyl]amino radicals, halogen atoms, carboxylic acid groups and sulphonic acid groups;

- i is chosen from 0, 1, 2 and 3;

- p is chosen from 0 and 1;

- q is chosen from 0 and 1;

- n is chosen from 0 and 1;

with the proviso that:

- (i) the sum $p + q$ is other than 0;

- (ii) when $p + q$ is equal to 2, then n is 0 and the groups NR₁R₂ and NR₃R₄ occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iii) when p is equal to 1 and q is equal to 0, then n is 1 and the group NR₁R₂ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iv) when p is equal to 0 and q is equal to 1, then n is 1 and the group NR₃R₄ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);]

and acid-addition salts thereof;

- and at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers, sesamol, α -naphthol, and acid-addition salts thereof.

33. (Twice Amended) A process for oxidation dyeing of keratin fibers, comprising:

applying to keratin fibers to be dyed a dyeing composition;

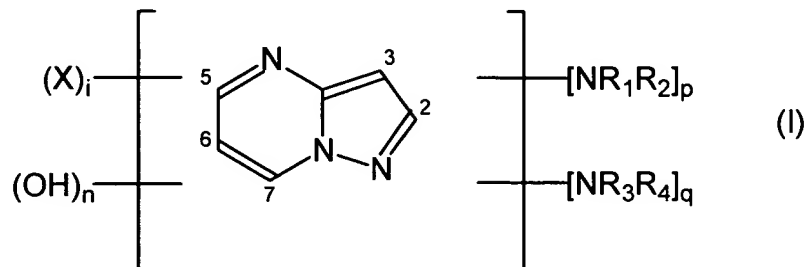
developing a desired color in said keratin fibers with the aid of at least one oxidizing agent;

wherein said dyeing composition comprises:

- at least one first oxidation base chosen from 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane and acid-addition salts thereof,

- at least one second oxidation base chosen from para-phenylenediamine, para-toluenediamine, N,N-bis-(β -hydroxyethyl)-para-phenylenediamine, 2-(β -hydroxyethyl)-para-phenylenediamine, 2,6-dimethyl-para-phenylenediamine, 2-isopropyl-para-phenylenediamine, 2-chloro-para-phenylenediamine, N-phenyl-para-phenylenediamine, 4,4'-diaminodiphenylamine, N-methoxyethyl-para-phenylenediamine, 2-n-propyl-para-phenylenediamine, 4-aminophenol, N-methyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 3-methyl-4-aminophenol, 2-aminomethyl-4-aminophenol, 2-(β -hydroxyethylaminomethyl)-4-aminophenol, 2-methoxy-4-aminophenol, 2-methoxymethyl-4-aminophenol, [tetraaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-N-methylpyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, N,N'-bis(β -hydroxyethyl)-N,N'-

bis(4'-aminophenyl)-1,3-diaminopropanol, 3-amino-6-dimethylaminopyridine and pyrazolo[1,5-a]pyrimidines of formula (I):



in which:

- R_1 , R_2 , R_3 and R_4 , which are identical or different, are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, $(C_1$ - C_4)alkoxy(C_1 - C_4)alkyl radicals, C_1 - C_4 aminoalkyl radicals wherein said amino can be protected with a protective group chosen from acetyl, ureido and sulphonyl groups, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C_1 - C_4)alkylamino(C_1 - C_4)alkyl radicals, and di[hydroxy(C_1 - C_4)alkyl]amino-(C_1 - C_4)alkyl radicals;
- radicals X are identical or different, and are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, C_1 - C_4 aminoalkyl radicals, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings,

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hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[hydroxy(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, amino radicals, (C₁-C₄)alkyl-amino radicals, di[(C₁-C₄)alkyl]amino radicals, halogen atoms, carboxylic acid groups and sulphonic acid groups;

- i is chosen from 0, 1, 2 and 3;

- p is chosen from 0 and 1;

- q is chosen from 0 and 1;

- n is chosen from 0 and 1;

with the proviso that:

- (i) the sum $p + q$ is other than 0;

- (ii) when $p + q$ is equal to 2, then n is 0 and the groups NR₁R₂ and NR₃R₄ occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iii) when p is equal to 1 and q is equal to 0, then n is 1 and the group NR₁R₂ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iv) when p is equal to 0 and q is equal to 1, then n is 1 and the group NR₃R₄ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);]

and acid-addition salts thereof;

- and at least one coupler.

55. (Twice Amended) A multi-compartment dyeing device, comprising:

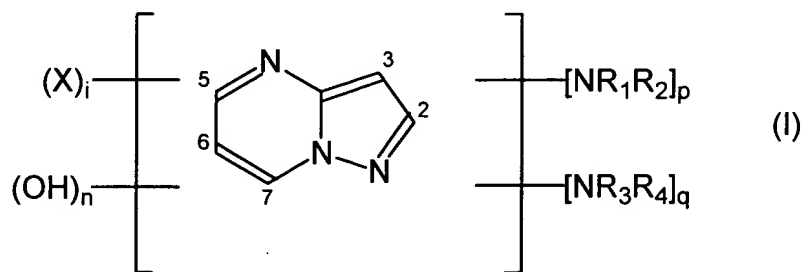
a first compartment,

a second compartment;

wherein said first compartment contains a dyeing composition comprising:

- at least one first oxidation base chosen from 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane and acid-addition salts thereof;

- at least one second oxidation base chosen from para-phenylenediamine, para-toluenediamine, N,N-bis-(β -hydroxyethyl)-para-phenylenediamine, 2-(β -hydroxyethyl)-para-phenylenediamine, 2,6-dimethyl-para-phenylenediamine, 2-isopropyl-para-phenylenediamine, 2-chloro-para-phenylenediamine, N-phenyl-para-phenylenediamine, 4,4'-diaminodiphenylamine, N-methoxyethyl-para-phenylenediamine, 2-n-propyl-para-phenylenediamine, 4-aminophenol, N-methyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 3-methyl-4-aminophenol, 2-aminomethyl-4-aminophenol, 2-(β -hydroxyethylaminomethyl)-4-aminophenol, 2-methoxy-4-aminophenol, 2-methoxymethyl-4-aminophenol, [tetraaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-N-methylpyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, N,N'-bis(β -hydroxyethyl)-N,N'-bis(4'-aminophenyl)-1,3-diaminopropanol, 3-amino-6-dimethylaminopyridine and pyrazolo[1,5-a]pyrimidines of formula (I):



in which:

- R_1 , R_2 , R_3 and R_4 , which are identical or different, are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, $(C_1$ - $C_4)$ alkoxy(C_1 - C_4)alkyl radicals, C_1 - C_4 aminoalkyl radicals wherein said

amino can be protected with a protective group chosen from acetyl, ureido and sulphonyl groups, (C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, and di[hydroxy(C₁-C₄)alkyl]amino-(C₁-C₄)alkyl radicals;

- radicals X are identical or different, and are chosen from a hydrogen atom, C₁-C₄ alkyl radicals, aryl radicals, C₁-C₄ hydroxyalkyl radicals, C₂-C₄ polyhydroxyalkyl radicals, C₁-C₄ aminoalkyl radicals, (C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[hydroxy(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, amino radicals, (C₁-C₄)alkyl-amino radicals, di[(C₁-C₄)alkyl]amino radicals, halogen atoms, carboxylic acid groups and sulphonic acid groups;

- i is chosen from 0, 1, 2 and 3;

- p is chosen from 0 and 1;

- q is chosen from 0 and 1;

- n is chosen from 0 and 1;

with the proviso that:

- (i) the sum $p + q$ is other than 0;
- (ii) when $p + q$ is equal to 2, then n is 0 and the groups NR₁R₂ and NR₃R₄ occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iii) when p is equal to 1 and q is equal to 0, then n is 1 and the group NR_1R_2 and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);
- (iv) when p is equal to 0 and q is equal to 1, then n is 1 and the group NR_3R_4 and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);]

and acid-addition salts thereof;

- and at least one coupler;

wherein said second compartment contains an oxidizing composition comprising:

- at least one oxidizing agent.

56. (Twice Amended) A dyeing kit comprising:

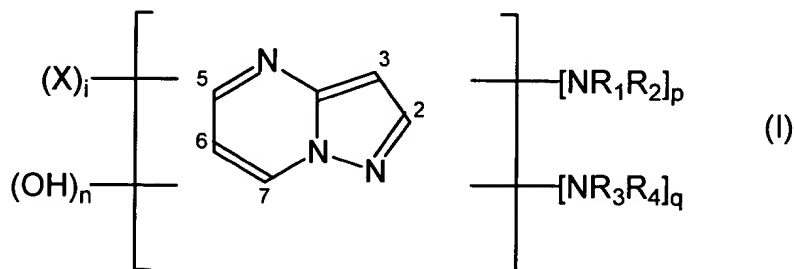
a first container,

a second container;

wherein said first container contains a dyeing composition comprising:

- at least one first oxidation base chosen from 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane and acid-addition salts thereof;
- at least one second oxidation base chosen from para-phenylenediamine, para-toluenediamine, N,N-bis-(β -hydroxyethyl)-para-phenylenediamine, 2-(β -hydroxyethyl)-para-phenylenediamine, 2,6-dimethyl-para-phenylenediamine, 2-isopropyl-para-phenylenediamine, 2-chloro-para-phenylenediamine, N-phenyl-para-phenylenediamine, 4,4'-diaminodiphenylamine, N-methoxyethyl-para-phenylenediamine, 2-n-propyl-para-phenylenediamine, 4-aminophenol, N-methyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 3-methyl-4-aminophenol, 2-aminomethyl-4-aminophenol, 2-(β -hydroxyethylaminomethyl)-4-aminophenol, 2-methoxy-4-aminophenol, 2-methoxymethyl-4-aminophenol, [tetraaminopyrimidine, 4-hydroxy-2,5,6-

triaminopyrimidine, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-N-methylpyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, N,N'-bis(β -hydroxyethyl)-N,N'-bis(4'-aminophenyl)-1,3-diaminopropanol, 3-amino-6-dimethylaminopyridine and pyrazolo[1,5-a]pyrimidines of formula (I):



in which:

- R_1 , R_2 , R_3 and R_4 , which are identical or different, are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, $(C_1$ - C_4)alkoxy(C_1 - C_4)alkyl radicals, C_1 - C_4 aminoalkyl radicals wherein said amino can be protected with a protective group chosen from acetyl, ureido and sulphonyl groups, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals, di[(C_1 - C_4)alkyl]amino(C_1 - C_4)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings, hydroxy(C_1 - C_4)alkylamino(C_1 - C_4)alkyl radicals, and di[hydroxy(C_1 - C_4)alkyl]amino-(C_1 - C_4)alkyl radicals;
- radicals X are identical or different, and are chosen from a hydrogen atom, C_1 - C_4 alkyl radicals, aryl radicals, C_1 - C_4 hydroxyalkyl radicals, C_2 - C_4 polyhydroxyalkyl radicals, C_1 - C_4 aminoalkyl radicals, $(C_1$ - C_4)alkylamino(C_1 - C_4)alkyl radicals,

di[(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, wherein said dialkyls can form a ring chosen from 5- and 6-membered aliphatic and heterocyclic rings,

hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radicals, di[hydroxy(C₁-C₄)alkyl]amino(C₁-C₄)alkyl radicals, amino radicals, (C₁-C₄)alkyl-amino radicals, di[(C₁-C₄)alkyl]amino radicals, halogen atoms, carboxylic acid groups and sulphonic acid groups;

- i is chosen from 0, 1, 2 and 3;

- p is chosen from 0 and 1;

- q is chosen from 0 and 1;

- n is chosen from 0 and 1;

with the proviso that:

- (i) the sum $p + q$ is other than 0;

- (ii) when $p + q$ is equal to 2, then n is 0 and the groups NR₁R₂ and NR₃R₄ occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iii) when p is equal to 1 and q is equal to 0, then n is 1 and the group NR₁R₂ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);

- (iv) when p is equal to 0 and q is equal to 1, then n is 1 and the group NR₃R₄ and the OH group occupy positions (2,3); (5,6); (6,7); (3,5) and (3,7);]

and acid-addition salts thereof;

- and at least one coupler;

wherein said second container contains an oxidizing composition comprising:

- at least one oxidizing agent.

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